

# SHARED QUEUE FOR MULTIPLE INPUT-STREAMS

## ABSTRACT OF THE DISCLOSURE

5           A queuing system uses a common buffer for receiving input data from multiple-inputs,  
by allocating memory-elements in the common buffer to each input-stream, as the streams  
provide their input data. To allow for an independently controlled unloading of the individual  
data-items from the multiple-input common buffer, the system maintains a mapping of the  
memory locations of the buffer that is allocated to each data-item in each input-stream. To  
10       minimize the memory and overhead associated with maintaining a mapping of each data-item,  
memory locations that are allocated to each input-stream are maintained in a sequential, first-in,  
first-out queue. When a subsequent receiving device acknowledges that it is ready to receive a  
data-item from a particular input-stream, the identification of the allocated memory location is  
removed from the input-stream's queue, and the data-item that is at the allocated memory in the  
15       common buffer is provided to the receiving device.